



[0001] **SYSTEMS AND METHODS FOR EXPEDITING THE IDENTIFICATION OF PRIORITY INFORMATION FOR RECEIVED PACKETS**

[0002] **TECHNICAL FIELD**

[0003] The present invention relates generally to communication systems and methods and, more particularly, to systems and methods for facilitating the identification of priority information and corresponding priority queues for packets received by a network device.

[0004] **BACKGROUND ART**

[0005] In computer networks, a number of network stations are typically interconnected via a communications medium. For example, Ethernet 802.3 is a commonly used local area network (LAN) scheme in which multiple stations are connected to a shared or dedicated serial data path. These stations often communicate with a switch or some other network device located between the data path and the stations connected to that path. The switch typically controls the communication of packets and includes logic for receiving and forwarding packets to their appropriate destinations.

[0006] Some conventional network switches provide different classes of service for packets they route. The particular class of service to be provided to a packet may be identified within the header of the packet. The switch typically uses the identified service class in determining how to route the packet.

[0007] Conventional network switches sometimes include priority queues that buffer information for packets that await transmission from the switches. The switches usually include priority queues of a few priority levels, such as high and low priority levels. The switches must, therefore, map the identified service class of a packet to the few priority levels supported by the switches. The network switches typically use time-consuming processes to identify the priority queues within the switches to receive packets of particular classes of service. For example, the network switches may carry out the lookup of the priority information from the packet in software, which is time consuming typically performed for priority information not available at the layer 2 header on the packet.

[0008] **DISCLOSURE OF THE INVENTION**

[0009] There exists a need for systems and methods that facilitate the identification of priority levels and priority queues for received packets. Systems and methods consistent with the present invention address this and other needs by using programmed priority level